AMENDMENTS TO THE CLAIMS:

Please cancel claim 1, without prejudice or disclaimer of its subject matter.

LISTING OF CLAIMS:

1.-9. (Cancelled).

10. (Previously Presented) A device for continuously measuring deformations in a tyre mounted on a rim, comprising:

at least one emitter;

at least one reflecting element; and

at least one optical sensor;

wherein the at least one emitter and the at least one optical sensor are disposed on the rim, wherein the at least one reflecting element is disposed on a first portion of an inner surface of the tyre,

wherein the at least one emitter emits a light beam toward the at least one reflecting element, wherein the at least one reflecting element reflects the light beam toward the at least one optical sensor, and

wherein the at least one optical sensor receives the reflected light beam, measures a first prechosen physical parameter associated with the reflected light beam, and provides a first signal representing a deformation of the tyre on the first portion of the inner surface of the tyre.

11. (Previously Presented) The device of claim 10, wherein the first prechosen physical parameter is a luminous intensity of the reflected light beam.

12. (Previously Presented) The device of claim 10, wherein the at least one optical sensor is operationally connected to a processor, and wherein the processor:

determines, using the first signal, a displacement of at least one point on the first portion of the inner surface of the tyre in a predetermined direction; and

provides an output signal representing the displacement of the at least one point on the first portion of the inner surface of the tyre in a predetermined direction.

13. (Previously Presented) The device of claim 10, further comprising:

a second emitter;

a second reflecting element; and

a second optical sensor;

wherein the second emitter and the second optical sensor are disposed on the rim, wherein the second reflecting element is disposed on a second portion of the inner surface of the tyre near the first portion of the inner surface of the tyre,

wherein the second emitter emits a second light beam toward the second reflecting element, wherein the second reflecting element reflects the second light beam toward the second optical sensor, and

wherein the second optical sensor receives the reflected second light beam, measures a second prechosen physical parameter associated with the reflected second light beam, and

provides a second signal representing a variation in distance between the second portion of the inner surface of the tyre and the rim.

14. (Previously Presented) The device of claim 13, wherein the second prechosen physical parameter is a luminous intensity of the reflected second light beam.

15. (Previously Presented) The device of claim 13, wherein the second prechosen physical parameter is a time difference between the second emitter emitting the second light beam and the second optical sensor receiving the reflected second light beam, and

wherein the second light beam has a given wavelength.

16. (Previously Presented) The device of claim 13, wherein the optical sensors are operationally connected to one or more processors, and wherein the one or more processors:

determine, using the first signal, a displacement of at least one point on the first portion of the inner surface of the tyre in a predetermined direction;

correct the displacement depending on the second signal; and

provide an output signal representing the corrected displacement of the at least one point on the first portion of the inner surface of the tyre in a predetermined direction.

17. (Previously Presented) The device of claim 16, wherein the one or more processors provide a measurement of a vertical compression of the tyre based on the second signal.

18. (Previously Presented) A motor vehicle wheel, comprising:

a tyre mounted on a rim; and

a device for continuously measuring deformations in the tyre;

where the device comprises:

at least one emitter;

at least one reflecting element; and

at least one optical sensor;

wherein the at least one emitter and the at least one optical sensor are disposed on the rim, wherein the at least one reflecting element is disposed on a first portion of an inner surface of the tyre,

wherein the at least one emitter emits a light beam toward the at least one reflecting element, wherein the at least one reflecting element reflects the light beam toward the at least one optical sensor, and

wherein the at least one optical sensor receives the reflected light beam, measures a first prechosen physical parameter associated with the reflected light beam, and provides a first signal representing a deformation of the tyre on the first portion of the inner surface of the tyre.

19. (Previously Presented) The motor vehicle wheel of claim 18, wherein the first prechosen physical parameter is a luminous intensity of the reflected light beam.

20. (Previously Presented) The motor vehicle wheel of claim 18, wherein the at least one optical sensor is operationally connected to a processor, and wherein the processor:

determines, using the first signal, a displacement of at least one point on the first portion of the inner surface of the tyre in a predetermined direction; and

provides an output signal representing the displacement of the at least one point on the first portion of the inner surface of the tyre in a predetermined direction.

21. (Previously Presented) The motor vehicle wheel of claim 18, wherein the device further comprises:

a second emitter;

a second reflecting element; and

a second optical sensor;

wherein the second emitter and the second optical sensor are disposed on the rim, wherein the second reflecting element is disposed on a second portion of the inner surface of the tyre near the first portion of the inner surface of the tyre,

wherein the second emitter emits a second light beam toward the second reflecting element, wherein the second reflecting element reflects the second light beam toward the second optical sensor, and

wherein the second optical sensor receives the reflected second light beam, measures a second prechosen physical parameter associated with the reflected second light beam, and provides a second signal representing a variation in distance between the second portion of the inner surface of the tyre and the rim.

22. (Previously Presented) The motor vehicle wheel of claim 21, wherein the second prechosen physical parameter is a luminous intensity of the reflected second light beam.

23. (Previously Presented) The motor vehicle wheel of claim 21, wherein the second prechosen physical parameter is a time difference between the second emitter emitting the second light beam and the second optical sensor receiving the reflected second light beam, and

wherein the second light beam has a given wavelength.

24. (Previously Presented) The motor vehicle wheel of claim 21, wherein the optical sensors are operationally connected to one or more processors, and wherein the one or more processors:

determine, using the first signal, a displacement of at least one point on the first portion of the inner surface of the tyre in a predetermined direction;

correct the displacement depending on the second signal; and

provide an output signal representing the corrected displacement of the at least one point on the first portion of the inner surface of the tyre in a predetermined direction.

25. (Previously Presented) The motor vehicle wheel of claim 24, wherein the one or more processors provide a measurement of a vertical compression of the tyre based on the second signal.